

REMARKS/ARGUMENTS

Reconsideration of the application is respectfully requested for the following reasons:

The drawings were objected because they do not show the MCM connected with a circuit board on said third surface. In respond to this objection, Applicants have amended claim 12.

The specification was objected to as failing to provide proper antecedent basis for the claimed subject matter. In respond to this objection, Applicants have amended the specification. Claim 3 also has been amended to correct the units. Reconsideration of the amended application is respectfully requested.

Rejection of Claims 8-10 Under 35 U.S.C. §112, second paragraph

In respond to this rejection, Applicant has amended Claim 8. Reconsideration of Claims 8-10 is respectfully requested.

Rejection of Claims 1-3, 7 and 11 Under 35 U.S.C. §102(b)

Claims 1-3, 7 and 11 were rejected under 35 U.S.C. §102(b) as being anticipated by Hayasaka et al. (US 6,089,421 B1).

Applicants respectfully traverse this rejection based on the fact that the teaching of Hayasaka et al. fails to disclose every element of the claimed invention. Particularly, Hayasaka et al. do not teach: 1) a

multilayer interconnection structure on said insulating layer and having a third surface having a plurality of first bonding pads and a fourth surface having a plurality of second bonding pads and on said insulating layer; 2) a plurality of conductive plugs penetrating said semiconductor substrate and said insulating layer and electrically connecting to said second bonding pads respectively; 3) a plurality of third bonding pads on said second surface and connecting to said conductive plugs respectively; and 4) a plurality of chips on said second surface and electrically connecting to said third bonding pads.

According to MPEP § 2131 Anticipation — Application of 35U.S.C. 102(a), (b), and (e) [R-1], TO ANTICIPATE A CLAIM, THE REFERENCE MUST TEACH EVERY ELEMENT OF THE CLAIM so that the teaching of Hayasaka et al. is insufficient to render the claimed invention unpatentable .

First of all, Hayasaka et al. do not mention that the multilevel interconnection layer 3 has a third surface having a plurality of first bonding pads and a fourth surface having a plurality of second bonding pads on the insulating film 11. Although Examiner suggests this description is recited in col. 10, lines 8-18, Applicants can not find such description in the paragraph of col. 10, lines 8-18 which only mentions about interconnection layers, contact holes and interlayer insulating films.

Secondly, Hayasaka et al. fail to teach a plurality of conductive plugs penetrating said semiconductor substrate and said insulating layer and electrically connecting to said second bonding pads respectively because Hayasaka et al. do not teach second bonding pads on a fourth

surface. Thirdly, Hayasaka et al. fail to teach a plurality of third bonding pads on said second surface and connecting to said conductive plugs respectively because Hayasaka et al. only teach conductive plugs 4 without any bonding pad on said second surface. Finally, Hayasaka et al. fail to teach a plurality of chips on said second surface and electrically connecting to said third bonding pads since Hayasaka et al. do not mention about any bonding pad on the bottom of the chip 1bs. Moreover, the insulating films 11, 5 and 7 of Hayasaka et al. are not on the top or first surface of the chip 1b contrary to the claimed invention. Therefore, the teaching of Hayasaka et al. actually fails to disclose every element of the claimed invention.

According to MPEP § 2131 Anticipation — Application of 35U.S.C. 102(a), (b), and (e) [R-1] TO ANTICIPATE A CLAIM, THE REFERENCE MUST TEACH EVERY ELEMENT OF THE CLAIM. “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). >“When a claim covers several structures or compositions, either generically or as alternatives, the claim is deemed anticipated if any of the structures or compositions within the scope of the claim is known in the prior art.” *Brown v. 3M*, 265 F.3d 1349, 1351, 60 USPQ2d 1375, 1376 (Fed. Cir. 2001) (claim to a system for setting a computer clock to an offset time to address the Year 2000 (Y2K) problem, applicable to records with year date data in “at least one of two-digit, three-digit, or four-digit” representations, was held anticipated by a system that offsets year dates in only two-digit formats). See also MPEP § 2131.02.< “The identical invention must be shown in as complete detail as is contained in the ... claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

The elements must be arranged as required by the claim, but this is not an ipsissimis verbis test, i.e., identity of terminology is not required. In re Bond, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

Rejection of Claims 4, 5, 6 and 10 Under 35 U.S.C. §103(a)

Claims 4, 6 and 10 were rejected under 35 U.S.C. §103(a) as being unpatentable over Hayasaka et al. in view of Ku (US 6,504,746 B2).

Applicants respectfully traverse this rejection since the combination of Hayasaka et al. and Ku fails to teach every element of the claimed invention. Particularly, Ku does not teach the about-mentioned five elements of the claimed invention which Hayasaka et al. fail to disclose. According to 2143 Basic Requirements of a *Prima Facie* Case of Obviousness, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Particularly, according to MPEP 2143.03, All Claim Limitations Must Be Taught or Suggested To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious.

In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). Therefore, the combination of Hayasaka et al. and Ku is insufficient to render the claimed invention unpatentable.

Claim 5 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Hayasaka et al. in view of Ku and Taniguchi et al. (US 6,404,062 B1).

Applicants respectfully traverse this rejection since the combination of Hayasaka et al. and Ku and Taniguchi et al. fails to teach every element of the claimed invention. Although Taniguchi et al. teach a flip chip mounting process, Taniguchi et al. still fail to teach the about-mentioned five elements of the claimed invention which Hayasaka et al. fail to disclose. According to MPEP 2143.03, if an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). Thus the combination of Hayasaka et al. and Ku and Taniguchi et al. is insufficient to render the claimed invention unpatentable.

Conclusion

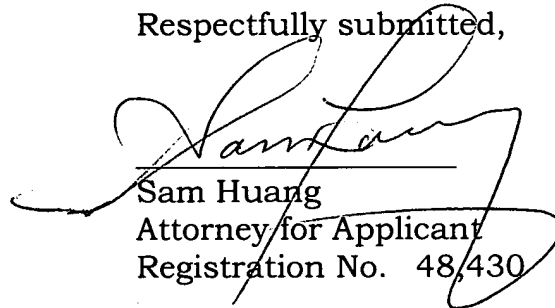
In light of the above remarks to the claims, Applicants contend that claimed invention is patentable thereover. Claims 1-12 are now in

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condition for favorable consideration and allowance of Claims 1-12 are most respectfully requested.

In the event this paper is not considered to be timely filed, the Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to counsel's Deposit Account No. 01-2300, referencing Attorney Docket No. 025796-00014.

Respectfully submitted,



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